

Amendments to the Drawings:

Applicant proposes to amend Figure 5(1) and 5(2) to change those figure titles to Figure 5A and 5B, respectively. A replacement formal drawing sheet and a marked up drawing sheet showing the changes made are included with this amendment and reply.

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

Claims 2-8 are currently being cancelled.

Claim 1 is currently being amended.

Claims 9-22 are currently being added.

This amendment adds, amends and cancels claims in this application. A detailed listing of all claims in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After adding, amending and canceling the claims as set forth above, claims 1 and 9-22 are now pending in this application.

Specification Amendments:

The specification has been amended to correct minor grammatical errors found therein.

Drawing Amendments:

Figure 5(1) and 5(2) have been amended to correspond to Figure 5A and Figure 5B, respectively, so as conform better to U.S. Patent Practice.

35 U.S.C. § 112, 2nd Paragraph Rejection of Claims 1-7:

In the Office Action, claims 1-7 were rejected under 35 U.S.C. § 112, 2nd paragraph, as being indefinite, for the reasons set forth on pages 2 and 3 of the Office Action. In particular, the Office Action asserts that the claims do not recite the step of mounting at least one electronic component while the claim languages are implying such a step.

In response, a component is indeed mounted on the substrate in the first mounting step before the substrate goes into inspection. However, such a mounting step corresponds to a precondition (e.g., substrate manufacturing step) under which the inspection method of the present invention is practiced, and thus it should not be included in the inspection process itself, since it is not a part of the inspection method.

As an example, consider a claim directed to stopping a vehicle, whereby such a claim would include a step of contacting a brake pedal of the vehicle in order to cause the vehicle to stop. However, such a claim would not include a step of manufacturing a brake component of the vehicle, since that it is outside the scope of such a claim for stopping a vehicle. A similar analogy exists in the present application with respect to a substrate inspecting method (which is different from a substrate mounting method).

To make this point more clear, “**undergoing** the first component mounting step” has been changed to “**that has undergone** the first component mounting step” in claim 1.

Accordingly, the presently pending claims are believed to fully comply with 35 U.S.C. § 112, second paragraph.

Claim Rejections – Prior Art:

In the Office Action, claims 1-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,941,646 to Suhara. This rejection is traversed with respect to presently pending claim 1, for at least the reasons given below.

Suhara does not disclose, teach or suggest the features specifically recited in claim 1. Specifically, the present invention according to claim 1 primarily addresses the problem of ‘component fly’ situation which occurs when a mounted component is improperly placed on undesired/unintended area, i.e., a mounting area for another component to be mounted at a later point in time, of the substrate. In the present invention according to claim 1, the substrate which has undergone the first component mounting step is subjected to an inspection before the second component mounting step so as to determine whether or not the component mounted by the first mounting step is improperly placed on a mounting area for another component to be mounted by the second component mounting step.

Suhara describes a mounting system which is configured to detect a relative positional gap between a location on a substrate for an electric component to be mounted and a mounting position for a mounting device to mount the component, whereby Suhara does not disclose or suggest the inspection arrangement as recited in claim 1.

New Claims:

New claims 9-22 have been added, whereby these new claims are believed to patentably distinguish over the teachings of Suhara. For example, new independent claim 9 recites a step of inspecting the component mounted in the step a) by fly inspection, to determine whether or not the component mounted in the step a) is improperly mounted so as

to at least partly cover a mounting area for a component to be mounted at a later point in time. Such features are not disclosed, taught or suggested by Suhara. Rather, Suhara describes a mounting system that takes an image of a substrate fiducial mark provided on a circuit substrate and detects a positioning error of the circuit substrate on the basis of the image of the substrate fiducial mark. See Abstract of Suhara.

New independent claim 14 recites features shown in Figure 7 of the drawings, whereby such steps are not disclosed, taught or suggested by Suhara.

The presently pending dependent claims 10-13 and 15-16 are patentable due to the specific features recited in those claims, as well as for their dependence on either claim 9 or claim 14.

New claims 17-22 are patentable due to the specific features recited in those claims, as well as for their dependence on claim 1 (the patentability of which is discussed in detail above).

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicant believes that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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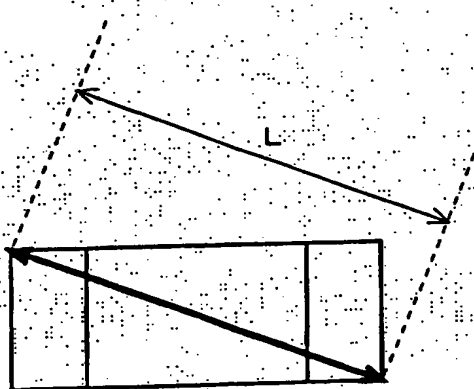


ANNOTATED SHEET SHOWING
CHANGES

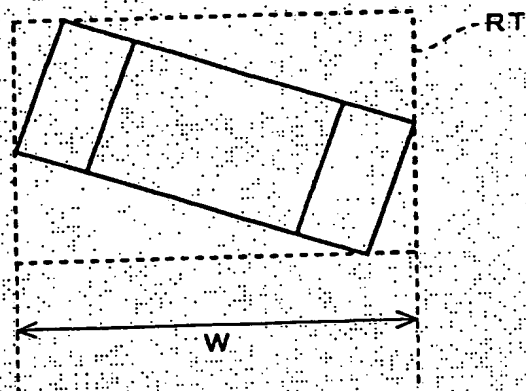
INVENTOR: KIYOSHI MURAKAMI
SERIAL NO.: 10/786,468

~~Fig. 5~~

~~Fig. 5A~~



~~Fig. 5B~~



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